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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,815	10/12/1999	KLAUS-PETER LINDNER	9090-0149	5340

25267 7590 02/13/2002

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EXAMINER

PECONE, RICHARD A

ART UNIT PAPER NUMBER

2123

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/415,015

Applicant(s)

STATON ET AL.

Examiner

Richard A Pecone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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DETAILED ACTION

Introduction

1. Claims 1-12 of U. S. Application 09/415,015 filed on 1999, October 12, are presented for examination.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

An apparatus (10, 12, 14) for use in an industrial process in which for communicating data and control signals it is connected to a central control unit (18) via a bus (16), characterized in that in said apparatus (10, 12, 14) a software apparatus model (20, 22, 24) is memorized which contains a comprehensive mimic image of said apparatus including its parameters, functionality and sequence programs.

McClanahan teaches about a software program model of an industrial processes in a plant via a CPU (memory and bus line) (See Column 2/lines 18-24, Column 19/lines 60-65). In addition, this simulation system is programmed (ie., process parameters, fault analysis of simulations of valves and dampers, mimic boards, etc.) for a multi-stage or sequenced operating processes in an industrial plant (See Column 2/lines 60-65, Column 5/lines 40-45, Column 11/lines 55-60, Column 14/lines 30-35, Figures 10a and 10b, and Table IIA).

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3. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The apparatus as set forth in claim 1, characterized in that said apparatus model (20, 22, 24) is formulated in a uniform program language with which said functionality and said parameters of said apparatus (10, 12, 14) can be explicitly simulated.

McClanahan teaches about inputting program instructions or language with parameters into a computer or the apparatus to simulate an industrial process (See Column 5/lines 39-47)

4. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The apparatus as set forth in claim 1 or 2, characterized in that said apparatus model (20, 22, 24) is memorized in a version permitting optimum use to be made of the available memory capacity in said apparatus (10, 12, 14).

McClanahan teaches about inputting program instructions or language into a computer (CPU). Because a CPU is being used for the apparatus, it is inherent that optimal memory could be configured (ie., hard disk, RAM, etc.) (See Column 5/lines 39-47).

5. Claim 4 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The apparatus as set forth in any of the claims 1 to 3, characterized in that said apparatus model (20, 22, 24) is modifiable by means of a software program.

McClanahan teaches about inputting a software program instructions or language with parameters into a computer or the apparatus to simulate an industrial

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process (See Column 5/lines 39-47). Modifying or revising software instructions is inherent in a computer system.

6. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The apparatus as set forth in any of the preceding claims, characterized in that the access for reading and writing said apparatus model (20, 22, 24) is made, possible by means of a software program.

McClanahan teaches about inputting a software program instructions or language with parameters into a computer or the apparatus to simulate an industrial process (See Column 5/lines 39-47). In addition, because this computer has a CPU, memory, and parallel bus it can read and write programmed instructions (Column 19/lines 57 to 65).

7. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The apparatus as set forth in claim 5, characterized in that access authorization to said software program for reading and writing is configurable.

McClanahan teaches about a programmed computer system to simulate plant operations. (See Column 2/lines 18-24). It is inherent in a computer system that access authorization is configurable.

8. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

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The apparatus as set forth in any of the preceding claims, characterized in that said access authorization is configurable on said apparatus model (20, 22, 24).

McClanahan teaches about a programmed computer system to simulate plant operations. (See Column 2/lines 18-24). It is inherent in a computer system that access authorization is configurable at the main terminal which would inhibit the operation of its operating system and its separate simulation models.

9. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The apparatus as set forth in any of the preceding claims, characterized in that said apparatus model (20, 22, 24) is memorizable on a data carrier and usable by a software program.

McClanahan teaches about processing software program instructions or data through lines (data carrier media/cables) via a CPU, memory (data storage and memory location), bus line, and multiplexers, etc. (See Column 19/lines 60-65 and Column 20/lines 34-44).

11. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

A plant including several apparatuses (10, 12, 14) as set forth in any of the claims 1 to 8, connected to a central control unit (18) via a bus (16), characterized in that said apparatus models (20, 22, 24) are loadable into said control unit (18), that in said control unit (18) a software program is provided with the aid of which in using said loaded apparatus models (20', 22', 24') the operation of said plant can be simulated for testing it in including all parameters and functionalities contained in said apparatus models (20', 22', 24').

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McClanahan teaches about a main terminal or central control unit for inputting software program instructions for simulating industrial processes in a plant into a CPU in which this system is connected by a parallel bus line. (See Column 2/lines 50-55). In addition, this simulation system is programmed (ie., process parameters, fault analysis of simulations of valves and dampers, mimic boards, etc.) for a multi-stage or sequenced operating processes in an industrial plant (See Column 2/lines 60-65, Column 5/lines 40-45, Column 11/lines 55-60, Column 14/lines 30-35). The programs that simulate plant operations are run simultaneously through an operating system. These programs are broken up into blocks or plant operation models or apparatus models (eg., boiler system, heat exchangers, pipes, valves, etc.) through input/output system (See Column 21, lines 21-26, Column 22, lines 59-68) In addition, the plant processes or models can be tested for faults (eg., values greater than specified parameters or functions) (See Column 14, lines 30-35).

12. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The plant as set forth in claim 9, characterized in that said apparatus models (20', 22', 24') are modifiable by said central control unit (18) depending on the result of simulation.

McClanahan teaches about a main terminal or central control unit that is coupled to a portable unit that can modify the plant operation's model parameters based on simulating fault conditions (See Column 2/lines 55-62)

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13. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

A method of simulating the operation of a plant as set forth in claim 9 or 10, characterized by it comprising the steps of loading apparatus models (20', 22', 24') of said apparatuses (10, 12, 14) to be employed in said plant into said central control unit (18) and simulating the operation of said plant in including all parameters and functionalities contained in said apparatus models (20', 22', 24') by means of a software program sequenced in said control unit (18)

McClanahan teaches about a main terminal or central control unit for inputting software program instructions for simulating industrial processes or operations in a plant into a CPU in which this system is connected by a parallel bus line. (See Column 2/lines 50-55). In addition, this simulation system is programmed (ie., process parameters, fault analysis of simulations of valves and dampers, mimic boards, etc.) for a multi-stage or sequenced operating processes in an industrial plant (See Column 2/lines 60-65, Column 5/lines 40-45, Column 11/lines 55-60, Column 14/lines 30-35). The programs that simulate plant operations are run simultaneously through an operating system. These programs are broken up into blocks or plant operation models or apparatus models (eg., boiler system, heat exchangers, pipes, valves, etc.) through input/output system (See Column 21, lines 21-26, Column 22, lines 59-68) In addition, the plant processes or models can be tested for faults (eg., values greater than specified parameters or functions) (See Column 14, lines 30-35).

14. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by McClanahan (4,613,952);

The method as set forth in claim 11, characterized by modifying said apparatus models (20, 22, 24) by said central control unit (18) as a function of the result of simulation.

McClanahan teaches about a main terminal or central control unit for inputting software program instructions for simulating industrial processes or operations in a plant into a CPU in which this system is connected by a parallel bus line. (See Column 2/lines 50-55). This simulation system is programmed for fault analysis or modifying values of devices for plant operation models for a multi-stage or sequenced operating processes in an industrial plant (See Column 14/lines 30-35).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

U.S. Pat. No. 3,919,720 to Alliston

Alliston does teach about a simulated plant, but it does get specific towards a nuclear power plant.

U.S. Pat. No. 6,278,899 B1 to Piche

Piche does teach about a simulated plant method which could be used as prior art.

U.S. Pat. No. 6,076,652 to Head

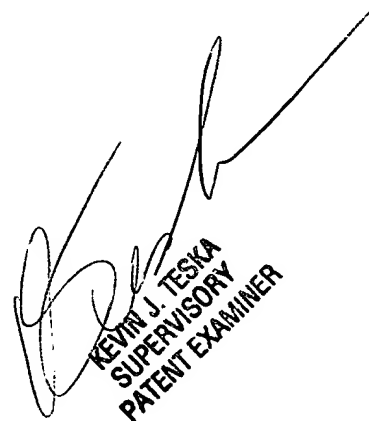
Head does teach about a simulation of an assembly operation which does get specific to one process.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rich Pecone whose telephone number is (703) 305-3188. The examiner can normally be reached on Monday thru Friday from 8:15 AM to 4:45PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska, can be reached on (703) 305-9704. The fax number for the organization where the application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



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